

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of manufacturing a probe comprising a cantilever beam, a probe tip and a contact area, said method comprising the steps of:

- etching a substrate using a first patterned masking layer as an etch mask, said etching creating a mould mold in said substrate;
- depositing a first layer on said mould mold and on said patterned masking layer;
- patterning said first layer to form the probe tip and the contact area;
- partially under-etching the probe tip using said patterned first layer as a hard mask; and
- peeling off the probe tip from the underlying first patterned masking layer.

2. (Original) The method as recited in Claim 1, further comprising the step of using said patterned first layer as a mask to remove said first patterned masking layer.

3. (Original) The method as recited in Claim 1, further comprising the step of selectively depositing at least one additional layer on said patterned first layer.

4. (Currently Amended) The method as recited in Claim 4 Claim 3, wherein said deposited first layer comprises a metal, and wherein said step of selectively depositing comprises the step of plating.

5. (Currently Amended) The method as recited in Claim 5 Claim 4, wherein said deposited first layer comprises Ti, W and Au and said additional layer comprises Ni.

6. (Original) The method as recited in Claim 1, further comprising the steps of:

- temporarily spacing apart a substantial part of said probe tip and said underlying first patterned masking layer; and
- attaching a holder chip to said contact area.

7. (Original) The method as recited in Claim 1, wherein said partially under-etching of said probe tip under-etches at least the probe tip.

8. (Currently Amended) The method as recited in Claim 1, wherein patterning said first layer comprises forming the cantilever beam between the contact area and the probe tip, and said partially under-etching of said probe tip under-etches at least the probe tip and the cantilever beam.

9. (Currently Amended) The method as recited in Claim 1, further comprising the steps of:

- depositing a second layer on said mould mold and on said first patterned masking layer; and
- patterning said second layer to form the probe tip.

10. (Original) The method as recited in Claim 9, wherein said first and said second layers comprise substantially the same material.

11. (Original) The method as recited in Claim 10, wherein said material comprises Ti, W and Au.

12. (Original) The method as recited in Claim 9, wherein said first and said second layers comprise substantially different material.

13. (Original) The method as recited in Claim 12, wherein said first layer comprises Ti, W and Au and said second layer comprises Cr or Diamond.

14. (Original) The method as recited in Claim 9, further comprising the step of annealing.

15. (Original) The method as recited in Claim 1, wherein said substrate comprises silicon.

16. (Original) The method as recited in Claim 1, wherein said first patterned masking layer comprises one of oxides, nitrides, and oxynitrides.

17. (Currently Amended) A probe comprising a cantilever beam, a probe tip and a contact area, the probe being manufactured by a method comprising the steps of:

- etching a substrate etched using a first patterned masking layer as an etch mask, said etching creating a mould in said substrate comprising a mold; and
- depositing a first layer deposited on said mould mold and on said patterned masking layer;
- patterning wherein said first layer is patterned to form the a probe tip, a cantilever beam and a contact area;

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- partially under etching and wherein the probe tip is partially under-etched using said patterned first layer as a hard mask; and
- peeling off wherein the probe tip is peeled off from the underlying first patterned masking layer.

18. (Currently Amended) The probe as recited in Claim 17, wherein the method probe further comprises:

- depositing a second layer deposited on said mould mold and on said first patterned masking layer; and
- patterning wherein said second layer is patterned to form the probe tip.

19. (Cancelled)

20. (Cancelled)